

CLAIMS

1. A polyelectrolyte comprising at least a styrenic polymer having a syndiotactic configuration, and exhibiting an ion exchange capability.
2. The polyelectrolyte according to claim 1, wherein said polyelectrolyte comprises an ion-exchange group-containing thermoplastic resin other than said styrenic polymer having a syndiotactic configuration, and an ion-exchange group-free polystyrenes having a syndiotactic configuration.
3. The polyelectrolyte according to claim 2, further comprising an ion exchange group-free other thermoplastic resin.
4. The polyelectrolyte according to claim 1, wherein said polyelectrolyte comprises a thermoplastic resin containing at least an ion-exchange group-containing styrenic polymer having a syndiotactic configuration.
5. The polyelectrolyte according to claim 4, wherein said polyelectrolyte comprises an ion-exchange group-containing styrenic polymer having a syndiotactic configuration, and an ion-exchange group-free thermoplastic resin.
6. The polyelectrolyte according to claim 4, wherein said polyelectrolyte comprises an ion-exchange group-containing styrenic polymer having a syndiotactic configuration, and an ion-exchange group-containing thermoplastic resin other than the styrenic polymer having a syndiotactic configuration.
7. The polyelectrolyte according to claim 6, further comprising an ion-exchange group-free thermoplastic resin.
8. The polyelectrolyte according to any one of claims 2, 4 and 6, wherein said ion-exchange group is a sulfonic group.
9. A polyelectrolyte membrane produced by forming the polyelectrolyte according to claim 1 into a film.
10. The polyelectrolyte membrane according to claim 9, wherein said polyelectrolyte membrane has an ion-exchange capacity of 0.65 milli-equivalent/g or more on the basis of weight of dried membrane.

11. A polyelectrolyte membrane according to claim 9, wherein said polyelectrolyte membrane is produced by forming the polyelectrolyte into a film by a melt-press method or a melt-extrusion method.
12. A fuel cell comprising the polyelectrolyte membrane according to claim 9.

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